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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,740	10/28/2005	Motonori Yamamoto	280113US0PCT	1234

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EXAMINER	
DEES, NIKKI H	
ART UNIT	**PAPER NUMBER**
1794	

NOTIFICATION DATE	DELIVERY MODE
03/05/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/554,740	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	Nikki H. Dees	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2008 and 10 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Amendment filed on February 10, 2009, has been entered. Claims 11-24 are currently pending in the application. The previous 102 rejection of claim 22 has been withdrawn in view of Applicant's amendments to claim 22.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 11-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warzelhan et al. (6,046,248) in view of Grijpma et al. (5,672,367).

4. The ‘248 patent teaches a biodegradable polyester comprising 30 to 60 mol % terephthalic acid (an aromatic dicarboxylic acid) and 40 to 70 mol % adipic acid (an aliphatic dicarboxylic acid) as well as dihydroxy compounds (col. 3 lines 34-54). Dihydroxy compounds include the alphatic diols diethylene glycol and triethylene glycol (col. 4 lines 12-26). The preferred molar ratio of a) to b) as taught by the '248 patent is from 1:2.4 to 1.5:1

5. The biodegradable polymer of the ‘248 patent may further comprise from 0 to 5 mol %, preferably 0.05 to 4 mol % a component with at least 3 groups capable of ester

formation. Examples listed include tartaric acid, citric acid, malic acid and glycerol (col. 4 lines 35 to 54).

6. The '248 patent teaches that the biodegradable polymer may be made without any toxic compounds for use in the food industry (col. 5 lines 55-59).

7. Regarding claim 23, the '248 patent also teaches a method for making the polyester (col. 3 lines 34-54).

8. The '248 patent is silent as to using the biodegradable polymer in a gum base.

9. The '367 patent teaches a chewing gum base and chewing gum product comprising a biodegradable polyester having a T_g of less that 37°C in the gum base (col. 1 lines 29-42). The chewing gum further comprises sweeteners and flavors (col. 2 lines 42-67). The use of traditional chewing gum additives including oils and waxes (col. 1 lines 14-19). Further, the use of fats, waxes, resins and oils is well-known in the chewing gum art. One of ordinary skill would have found it obvious to include any one or more of these additives without undue experimentation.

10. The '367 patent additionally teaches a method for making a chewing gum product comprising mixing the gum base containing the polyester with additional traditional gum components (Examples 1 and 2).

11. As both the '248 and '367 teach biodegradable polyesters, it would have been obvious to substitute the polyester of the '248 patent in for the polyester of the '367 patent in order to provide a chewing gum base comprising a biodegradable polyester. The substitution of one known element for another would not have required undue

experimentation, and would have yielded predictable results to one of ordinary skill in the art at the time the invention was made.

12. Regarding claim 21, complying with the requirements for kosher food does not impart a structural difference to the invention and therefore cannot be relied upon to distinguish from the prior art. It is therefore considered obvious to provide the claimed invention in a kosher form if one of ordinary skill desired to market the product to the segment of the population desiring kosher products.

13. Regarding the amendments to claim 22 and new claim 24, while it is recognized that the phrase "consisting essentially of" narrows the scope of the claims to the specified materials and those which do not materially affect the basic and novel characteristics of the claimed invention, absent a clear indication of what the basic and novel characteristics are, "consisting essentially of" is construed as equivalent to "comprising". Further, the burden is on the applicant to show that the additional ingredients in the prior art, i.e. additional ingredients in the gum base, would in fact be excluded from the claims and that such ingredients would materially change the characteristics of the applicant's invention, See MPEP 2111.03.

14. Applicant's range for the polymer contained in the gum base is 20 to 90% by weight, preferably 20 to 50 % by weight [0045]. The polymer is present in combination with other common gum base ingredients, including resins, waxes, fats and oils, fillers, colors, and antioxidants [0046]-[0052]. Grijpma et al. teach their gum base comprising 10 to 15% by weight of fillers, as well as gum base ingredients such as emulsifiers (including fatty acid mono-, di-, and triglycerides) and antioxidants (col. 2 lines 28-41).

et al. is considered to result in a gum base consisting essentially of the polymer as claimed. As the gum base of the prior art contains the same art-recognized components as that of the instant application, the combination of Warzelhan et al. and Grijpma et al. is considered to meet the "consisting essentially of" limitation.

Response to Arguments

15. Applicant's arguments filed December 11, 2008, have been fully considered but they are not persuasive.

16. Applicant argues that the polyether ester (P1) of the invention of Warzelhan et al is not the final product of the invention (Remarks, pp. 6-7).

17. It is noted that the Warzelhan et al. document teaches many different biodegradable polymers. The P1 polymers, prior to any further reaction, are known to be biodegradable polymers produced by methods known in the prior art (col. 5 lines 3-12, 22). Therefore, one of ordinary skill would have understood that the P1 polymers could have been used in applications where biodegradable polymers were desired without any of the further processing also taught by Warzelhan et al.

18. Applicant argues that the biodegradable polymers of Grijpma et al. are “decidedly different” than the biodegradable polymers of the instant invention (Remarks, pp. 7-8).

19. As biodegradable polymers are known to be included in chewing gum, as taught by Grijpma et al., one of ordinary skill would have found it obvious to substitute other

known biodegradable polymers with the reasonable expectation that the substitution would continue to provide a biodegradable chewing gum.

20. Regarding the combination of Warzelhan and Grijpma, Applicant argues that the polymers of Warzelhan et al., while suitable for use in food packaging, are not edible (Remarks, p. 8).

21. In response, it is noted that chewing gum is generally not considered to be an edible material, as evidenced by the US Patent Classification of the instant application in 426/003 titled "Normally Noningestible Chewable Material or Process of Preparation." It is widely recognized in the art that chewing gums, and the polymers included in them, are generally not intended to be consumed by the chewer of the gum, and, if swallowed, are not broken down further in the human gut. Therefore, a polymer that is produced to be safe for contact with foodstuffs would also be considered suitable for inclusion in chewing gums.

Conclusion

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikki H. Dees whose telephone number is (571) 270-3435. The examiner can normally be reached on Monday-Friday 7:30-5:00 EST (second Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nikki H. Dees/ Nikki H. Dees

Examiner, Art Unit 1794
/Lien T Tran/
Primary Examiner, Art Unit 1794

Examiner
Art Unit 1794